JVC

SERVICE MANUAL

MODEL JL-A15

SEMI-AUTOMATIC TURNTABLE

No. 2374
April 1976

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NOTE :
(J) – U.S.A.
(M) – CANADA
(U) – Other Areas
(P) – PACEX
(E) – Europe
(A) – Australia
(B) – U.K.

Setting Up

1. Remove main weight (A).
2. Remove two platter protectors (B), screw (C) and caution tag (D).
3. Untie vinyl ribbon (E).
4. Pass the belt behind the shift lever and place it on the motor pulley.
5. Place the platter pat provided on the turntable platter.

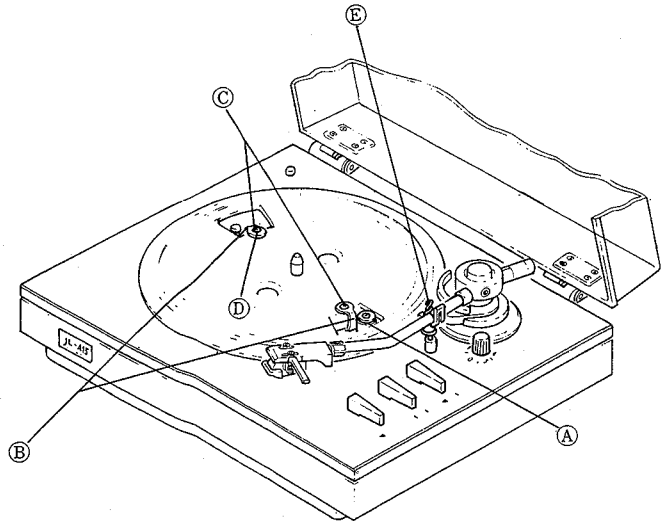

Fig. 1

Operation of Automatic Mechanism

Change cycle mechanism:

1. During playing, the notch of the main gear position relative to the turntable spindle gear is as shown in Fig. 2. As the projection is away from the engagement, the main gear does not rotate even though the turntable.
2. As playing proceeds, the trip slide moves toward the center of the turntable following the movement of the tonearm as shonw in Fig. 3.
3. The engagement is very easy to move as it simply rests on the lower trip. On the music section of the record groove the engagement moves so slightly that it is returned by the tip of the projection. Consequently, the turntable spindle gear does not engage with the main gear and thus does not trigger the auto-return operation.
4. When playing ends and the pick-up cartridge enters the lead-out groove which is spaced out, the engagement advances more than it is returned by the projection. Because of this, the engagement is pressed by the projection as shown in Fig. 4, causing the main gear to turn and engage with the turntable spindle gear. Thus the change cycle is started.
5. During the return operation the engagement and lower trip which have moved are returned to their original position by the reject lever coming into contact with the bottom of the lower trip. At this moment the switch lever operates with the help of the main gear cam, switching off the power just before the rotation should stop. This completes the automatic cycle.

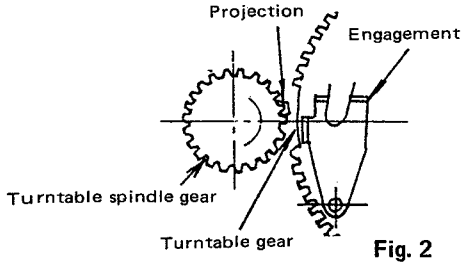

Fig. 2

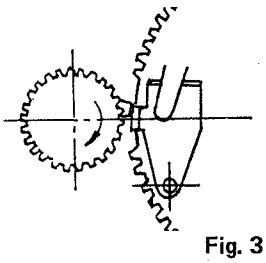

Fig. 3

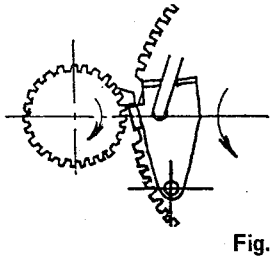

Fig. 4

Tonearm lift and return mechanism:

1. When the main gear starts to rotate at the end of playing, the return lever rotates under the action of the main gear cam to press the elevator cam. The upward movement of the elevator cam is directly converted into movement of the elevator, lifting up the tonearm. (Fig. 5)
2. The tonearm is returned by the arm lever the end of which presses it as the main gear rotates. (Fig. 6)

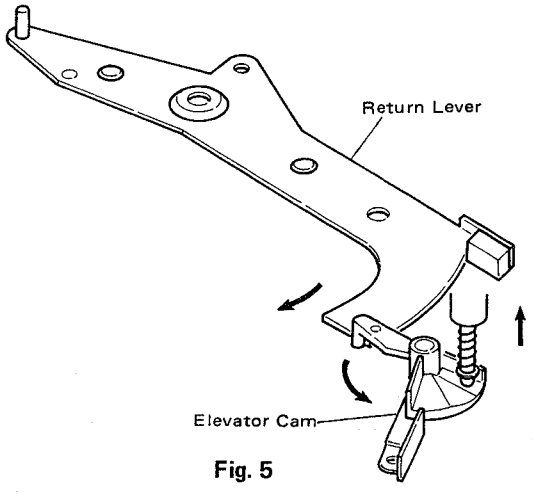

Fig. 5

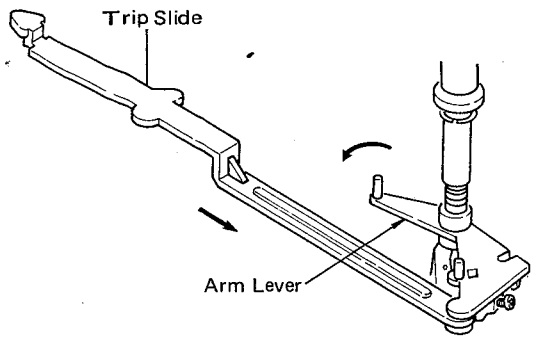

Fig. 6

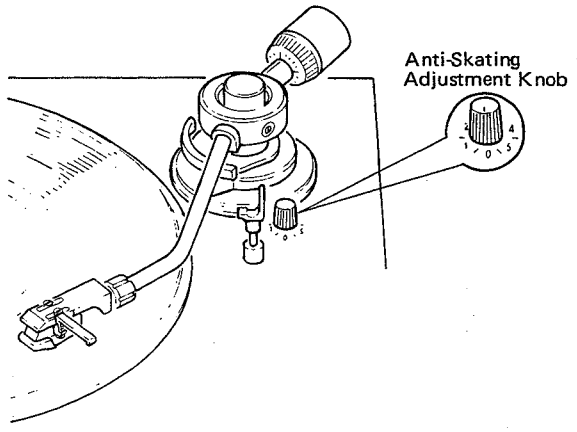

Fig. 8

Adjustments

* Tracking force:

1. Lower the elevator and remove the tonearm from the arm rest. The anti-skating dial should be adjusted to "0".
2. Turning the main weight, balance the tonearm with the stylus tip at the level of the record surface.
3. Holding the main weight so it does not move, turn the tracking force dial to bring its "0" to the index line on the weight shaft.
4. Turn the main weight clockwise (so that it moves forward) to adjust the tracking force. (Fig. 7)

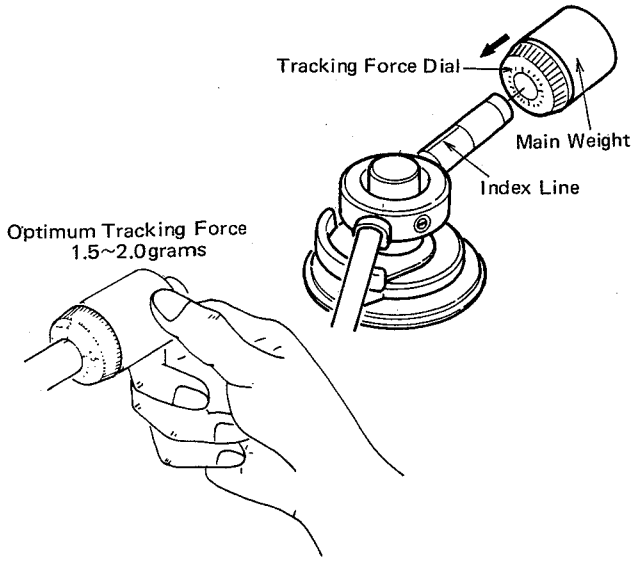

Fig. 7

* Anti-skating

Anti-skating adjustment is done depending on the tracking force. The figures on the dial indicate tracking forces. Set it to the same value to which the tracking force is adjusted. (Fig. 8)

* Stylus height:

The optimum position is with the stylus 6 - 10mm from the record surface when a single record is placed on the turntable and the arm elevator is lifted. Turning the adjustment screw clockwise lowers the stylus and turning it counterclockwise raises the stylus. (Fig. 9)

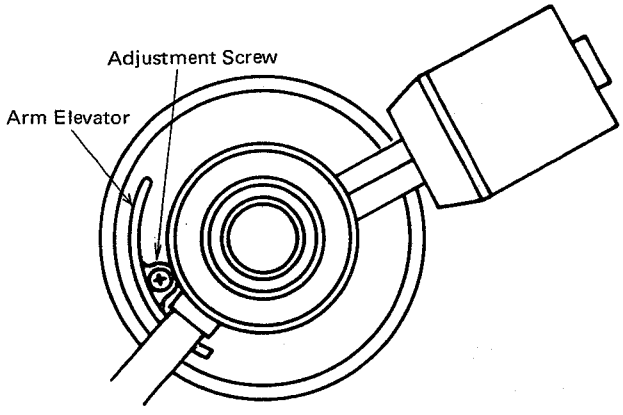

Fig. 9

* Auto-return (lead-out) timing:

When the pulley has been replaced for a different record or if it takes place early, adjust as shown in Fig. 10.

- When change cycle starts too late, turn the screw counterclockwise with a screwdriver.
- When change cycle starts too early, turn the screw clockwise.

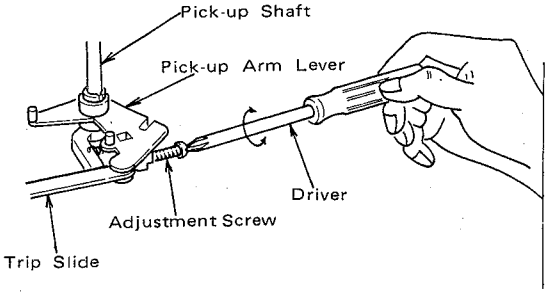

Fig. 10

* **Pulley height:**

When the pulley has been replaced for a different frequency, adjust the height of the pulley so that the belt is located in the middle of each section. If this is not done its correct speeds cannot be obtained and the speed change will not be smooth.

If the belt is in contact with the shift lever, the height of the pulley is not correct. Loosen the set screw and adjust the pulley vertically. (Fig. 11)

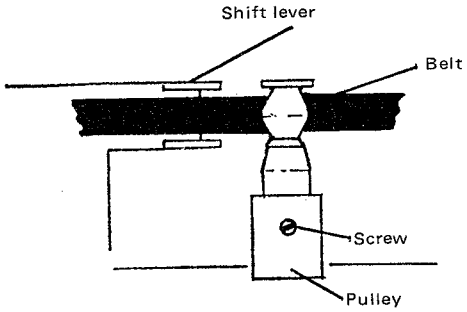

Fig. 11

Cartridge Mounting

The four cartridge lead wires and colour-coded as illustrated in Fig. 12. Connect the lead wire sockets to the appropriate pins of the cartridge, then fix the cartridge to the head shell with the two fixing screws. Keep the fixing screws untightened so that you can undertake the eventual overhang procedures easily.

Blue (to "LE" or "L-" on the cartridge)
Green (to "RE" or R-")
Red (to "R+" or "R")
White (to "L+" or "L")

NOTE: To play discrete 4-channel records, simply replace the JVC cartridge Model MD1025Z and stylus Model 4DT-Z1S.

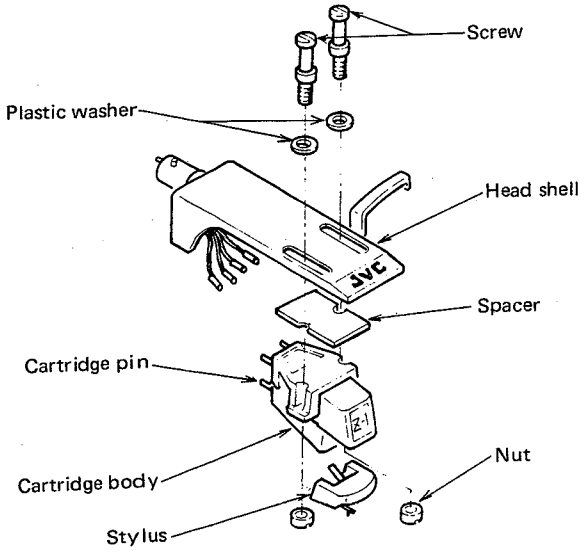

Fig. 12

Lubrication

Use quality mineral oil such as sewing machine oil on the motor shaft and turntable spindle.

* Motor shaft
  5 - 6 drops once a month for heavy use
  1 - 2 drops every three months for normal home use.

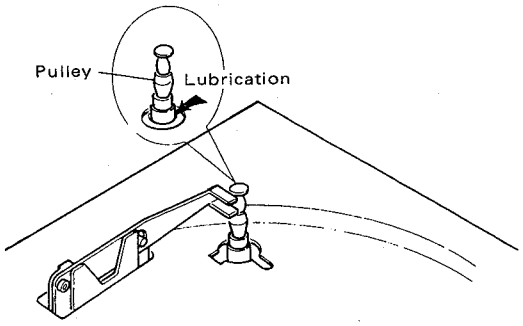

Fig. 13

Exploded View of Parts 1

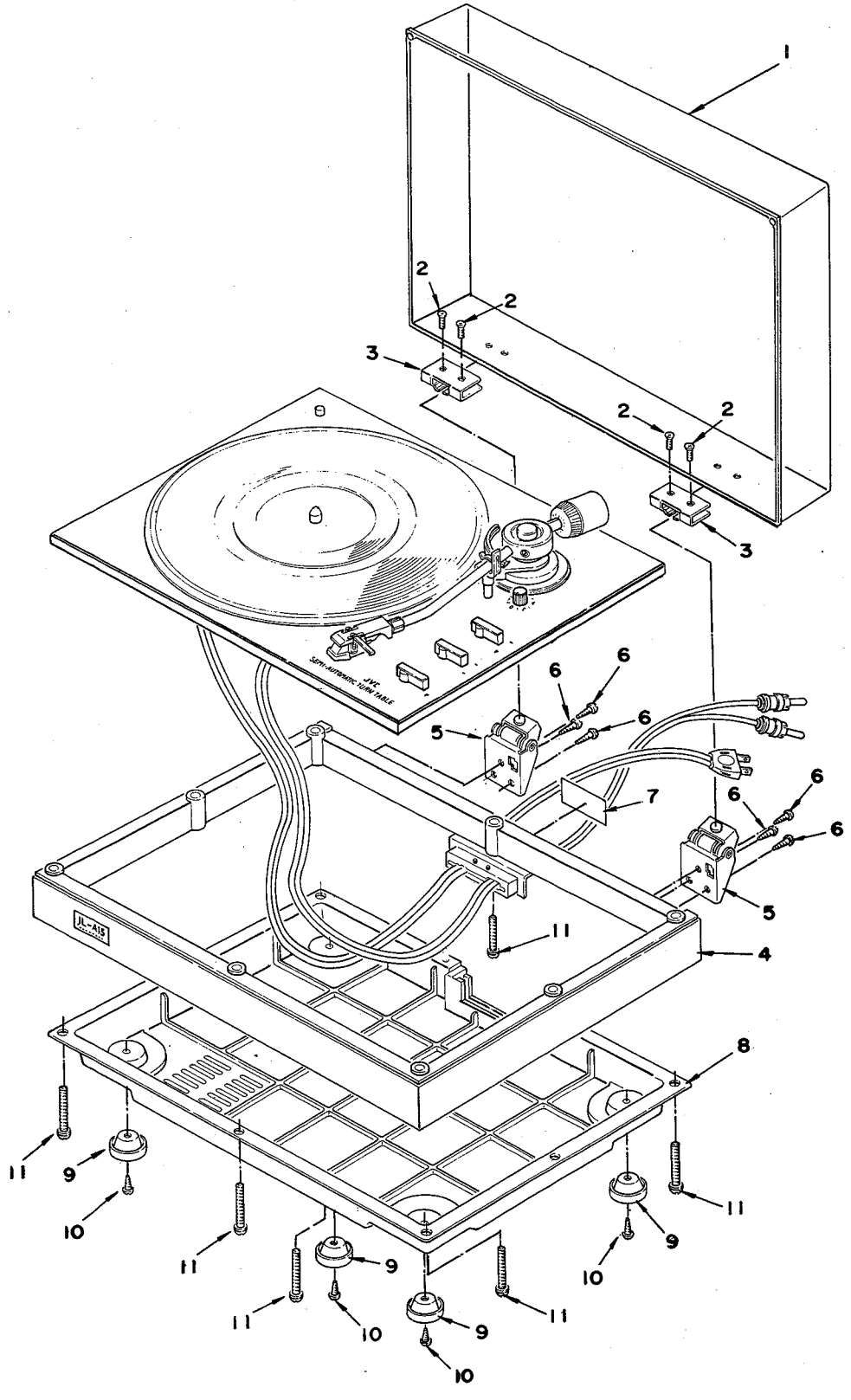

Fig. 14

List of Parts for Replacement 1

NO.	PARTS NO.	PARTS NAME	REMARKS	Q'TY
1	E10095-002	Dust Cover		1
2	SHSP3010RS	Screw		4
3	E60990-001	Lock Plate		2
4	E10098-006	Cabinet	J, M	1
	" -007	"	U, P, E, A, B	1
5	E60989-001	Hing Ass'y		2
6	SBSB3008M	T. Screw		6
7	E47330-233J	Rating Label	J	1
	" -234U	"	U	1
	" -235P	"	P	1
	" -236E	"	E	1
	" -237A	"	A	1
	" -238BS	"	B	1
	E49273-004	"	M	1
8	E10101-001	Bottom Board	U, P, E, A, B	1
	" -002	"	J, M	1
9	E61114-001	Foot Ass'y		4
10	SBSB3008Z	Tapping Screw		4
11	LPSP4040MS	Ass'y Screw		8

Eeploded View of Parts 2

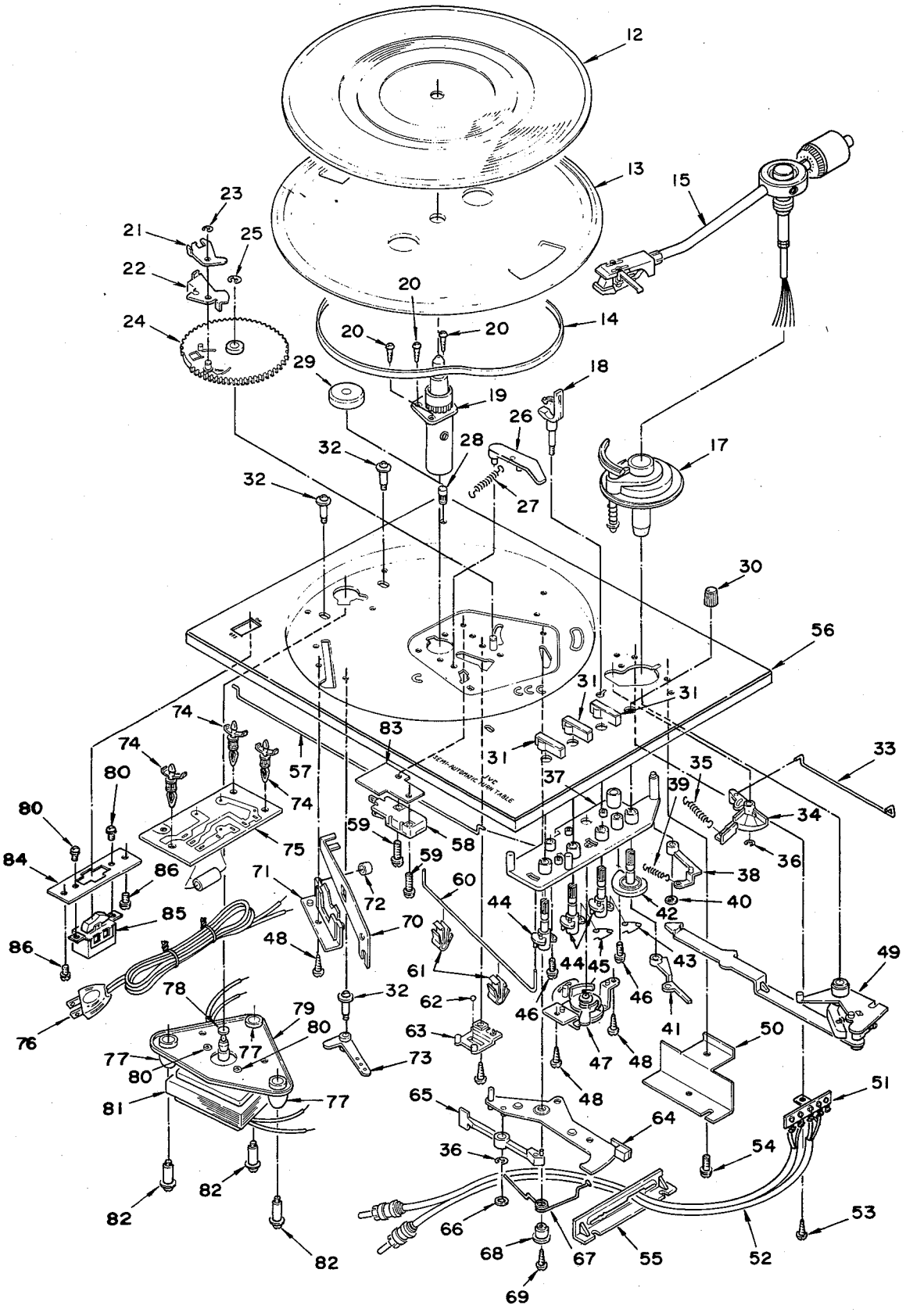

Fig. 15

List of Parts for Replacement 2

NO.	PARTS NO.	PARTS NAME	REMARKS	Q'TY
12	E21910-002	Turntable Covering	U, P, E, A, B	1*
	E21910-003	"	J, M	1*
13	E21908-001	Turntable		1*
14	G30005	Belt		1
15	MP163SB	Pick-up Ass'y	U, P, E, A	1*
16	ARM510	Tonearm Ass'y	J, M, B	1*
17	E22048-001	P.U. Base Ass'y		1*
18	E60982-001	Rest Ass'y		1*
19	E33901-004	Spindle Ass'y		1
20	SBSB3008Z	Tapping Screw		3
21	E49627-001	Engagement Pawl		1
22	E49626-001	Lower Trip Pawl		1
23	REE2000X	E Ring		1
24	E21656-001	Main Gear Sub Ass'y		1
25	REE5000	E Ring		1
26	E49623-002	Reject Lever		1
27	E49651-001	Spring		1
28	E49629-001	Adaptor Holder		1
29	E48820-001	EP Adaptor		1
30	E60341-001	Knob Ass'y		1*
31	E60336-001	"		3*
32	E49717-001	Motor Holder		2
33	E60986-001	Rod		1
34	E49595-003	Elevator Cam		1
35	E49596-001	Spring		1
36	REE3000X	E Ring		1
37	E34503-001	Knob Base		1*
38	E49604-001	Leading Lever		1
39	E49605-001	Spring		1
40	E60912-001	Speed Nut		1
41	E49603-001	I.F.C. Lever		1
42	E60981-001	Cam Shaft		1*
43	E49608-002	Spring		1*
44	E34504-001	Knob Shaft		3*
45	E60791-001	Spring		1*
46	LPSP4006NS	Ass'y Screw		2
47	E34240-001	Cueing Ass'y		1
48	SBSB3008Z	Tapping Screw		2
49	E33896-002	Arm Lever Ass'y		1
50	E60987-001	Shield Cover	U, P, E, A, B	1*
	E61145-001	"	J, M	1*
51	QML1310-041	Lug Strip Ass'y	J, M, U, P, E, A	1
	QML1310-051	"	A	1
52	G30062-005	Signal Wire Ass'y		1
53	SBSB3008N	Tapping Screw		1
54	LPSP4006NS	Ass'y Screw		1
55	E34507-001, 001BS	Cord Stopper	J,M,U,P,E,A→001, B→001BS	1*
	E34507-002	"	A	1*
56	E10100-002	Motor Board Ass'y	J, M, U, P, E, A	1*
	E10100-003	"	B	1*
57	E61095 001	Rod		1*
58	QSM1V01-018	Micro Switch	J, M, U, P, A	1
	QSM1V01-022, 022BS	"	E→022, B→022BS	1
59	LPSP3014ZS	Ass'y Screw	J, M, U, P, A	2
	SPKP3015S	P. Screw	E, B	2
60	E60985-001	Rod		1*
61	E49679-001	Rod Holder		1
62	G41505-1	Steel Ball		1
63	E49873-002	Ball Holder		1
64	E49613-004	Return Lever Ass'y		1
65	E49657-001	Switch Lever		1
66	RDS3000F	C.S. Ring		1
67	E60796-001	Spring		1*
68	E49607-001	Bushing		1
69	SBSB3012Z	Tapping Screw		1
70	E60352-001	Shifter		1
71	E33900-001	Shifter Holder		1
72	E60790-001	Rubber Tube		1
73	E61094-001	Shift Lever		1
74	E34530-001	C.B. Holder		3*
75	TSC-60B	Circuit Board Ass'y	J, M (to include Capa. QFM72EM-473)	1*
	TSC-60C	"	U, P (" QFH53AM-473)	1*

NO.	PARTS NO.	PARTS NAME	REMARKS	Q'TY
75	TSC-60E	Circuit Board Ass'y	E (to include Capa. QFZ9007-473)	1*
	TSC-60F	"	A (" QFH53AM-473)	1*
	TSC-61ABS	"	B (" QFZ9007-473BS)	1*
76	QMP1200-244	Power Cord	J, M, P	1
	E03329-001	"	U	1
	QMP3910-244	"	E	1
	E03551-002	"	A	1
	QMP9017-007BS	"	B	1
77	E49631-003	Rubber Bushing		3
78	E60962-001	Pulley Ass'y (50Hz)		1*
	E60962-002	" (60Hz)		1*
79	E61096-001	Mounting Plate		1
80	LPSP3006Z	Ass'y Screw		2
81	M712B or BBS	Motor Ass'y	P, E, B B-BS	1*
	M712C	"	J, M, U, A	1*
82	E49633-001	Motor Holder		3
83	E60964-001BS	Insulator Sheet	B, E	1
84	E61157-001	Bracket	B	1*
85	QSE2235-203BS	Seesaw Switch	"	1
86	LPSP4008ZS	Ass'y Screw	"	2

Accessories

NO.	PARTS NO.	PARTS NAME	REMARKS	Q'TY
1	E30580-517A, ABS	Inst. Book	J,M,U,P,E,A→A, B→ABS	1
2	E22128-001	C. Sheet	J, M	1*
	" -002	"	U, P	1*
	" -003	"	E, A	1*
	" -004BS	"	B	1*
3	BT-20022B	Warranty Card	J	1
	BT-20025	"	M	1
	BT-20014	"	P	1
	BT-20029	"	A	1
	BT-20013B	"	B	1
4	BT-20023	Service Pro.	J	1
5	BT-20024	Do It Better	J	1
6	E48820-001	E.P. Adaptor		1
7	E60962-001 or 002	Pulley	U, P (001 50Hz, 002 60Hz)	1
8	E64209-003 or 004	Envelope	U, P (003 50Hz, 004 60Hz)	1
9	E45557-002	Screw Driver	U, P	1
10	E64207-001	Envelope		1

Exploded View of Pick-up

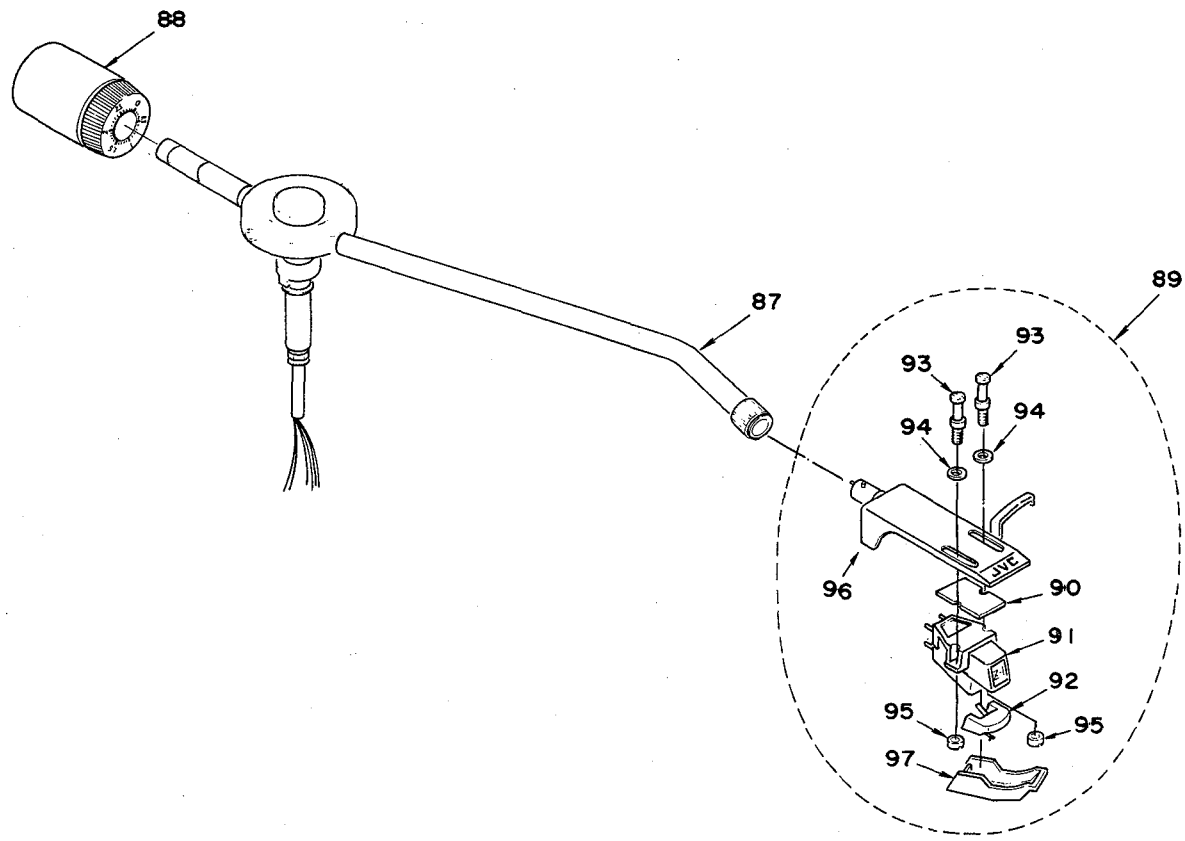

Fig. 16

NO.	PARTS NO.	PARTS NAME	REMARKS	Q'TY
87	E22081-001	Pipe Arm Ass'y		1*
88	E34534-001	Main Weight Ass'y		1*
89	E21933-004	Cartridge-Head Shell Ass'y		1*
90	EG83496	Spacer		1*
91	MD1025Z	Cartridge Ass'y	Optional B, J and M	1*
92	DT-Z1S	Stylue Ass'y	"	1*
93	E60562-001	Screw		2
94	EG82971	Washer		2
95	E60503-001	Nut		2
96	E34265-006	Head Shell Body		1
97	E34268-001	Stylus Cover	Optional B, J and M	1*

Exploded View of Motor

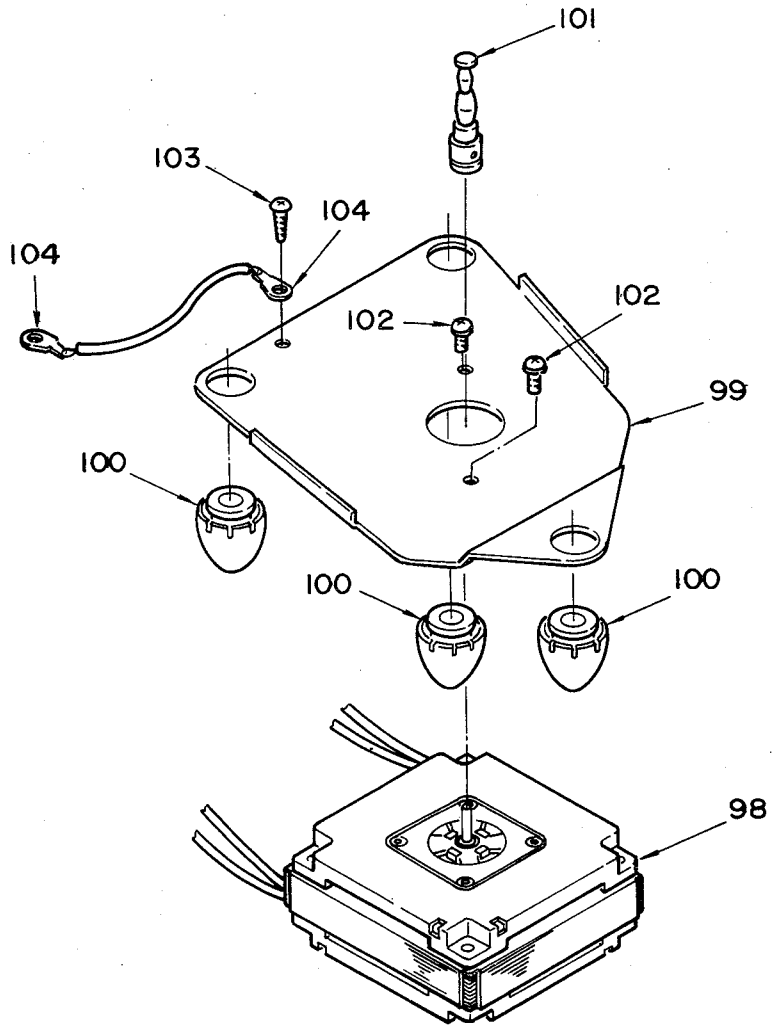

Fig. 17

NO.	PARTS NO.	PARTS NAME	REMARKS	Q'TY
98	M712B or BBS	Motor Ass'y	P, E→B, B→BBS	1*
	M712C	"	J, M, U	1*
99	E33905-004	Mounting Plate		1
100	E49631-003	Rubber Bushing		1
101	E60962-001	Pulley Ass'y	50Hz	1
	E60962-002	"	60Hz	1
102	LPSP3006ZS	Ass'y Screw		2
103	SBSB3008N	Tap Screw		1
104	52396	Terminal Lug		2

Model JL-A15 Schematic Diagram

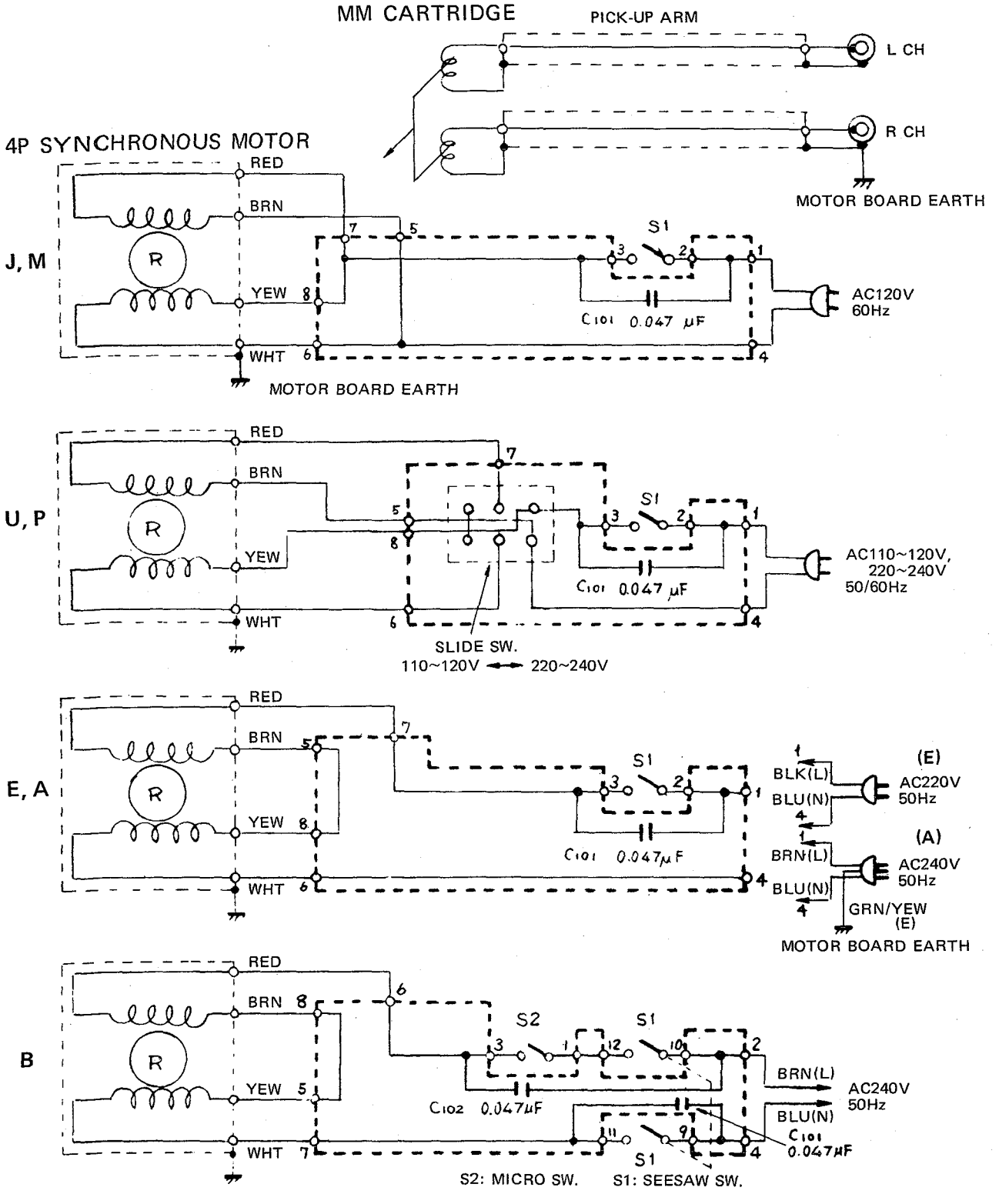

Fig. 18

Final Packing Ass'y

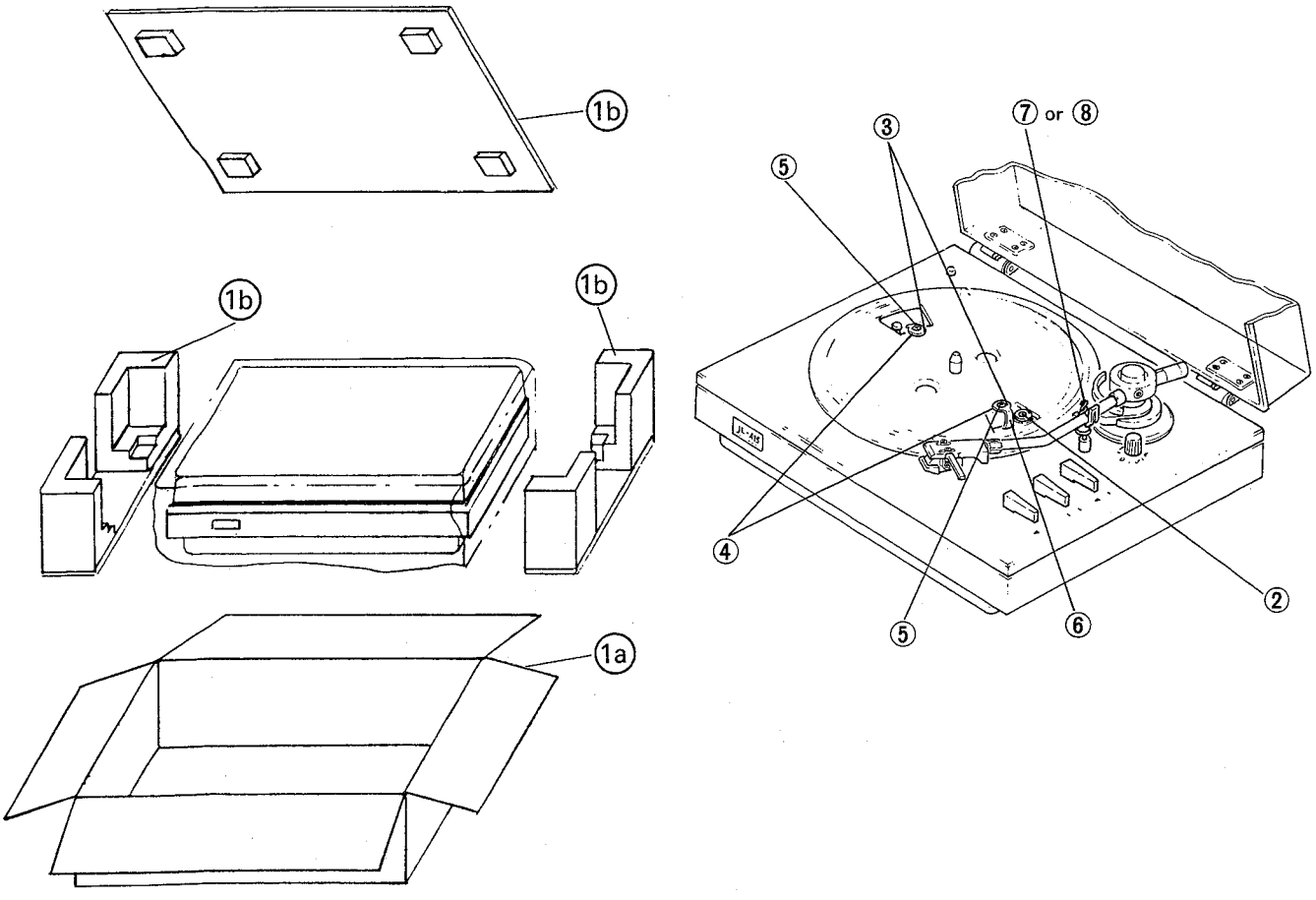

Fig. 19

NO.	PARTS NO.	PARTS NAME	REMARKS	Q'TY
1a	JL-A15-PK	Catron Box		1*
1b	JL-A15-NZ	Packing Materials	To include pad	1*
2	SPSP4045AS	Screw		1
3	G6771-1	Caution Tag	For Pick-up Main Weight	1
4	Q03091-113	Washer		1
5	SPSP6050AS	Screw		2
6	E33939-001	Platter Protector		2
7	Q04141-1-J	Wire Clamp	50Hz	1
8	Q04141-2-J	"	60Hz	1

Specifications

MOTOR AND TURNTABLE

Drive System:	Belt drive system
Drive Motor:	4 poles synchronous motor
Speeds:	33-1/3 and 45 rpm
Wow and Flutter:	Less than 0.06% (WRMS)
Signal to Noise Ratio:	Better than 53dB (IEC-B) 63dB (DIN-B)
Platter:	12-inch(30cm) diameter die-cast aluminum alloy

TONEARM

Type:	Statically-balanced S-shaped tubular arm with JVC-developed TH balancing system and with tracking force dial of 0.1 gram steps
Effective Arm Length:	220mm
Overhang:	15mm
Applicable Tracking Force Range:	0 to 3 grams

CARTRIDGE

Type:	Moving magnet (MD-1025)
Stylus:	0.5mil, diamond Model DT-Z1S for stereo and Model 4DT-Z1S for discrete 4-channel
Optimum Tracking Force:	1.5 to 2.0 grams (DT-Z1S) 1.5 to 2.0 grams (4DT-Z1S)
Output:	3mV (1kHz)
Frequency Responce:	10 to 25,000Hz
Separation:	Better than 25dB (1kHz)
Load Resistance:	47 to 100kohms
Compliance:	25 x 10^{-6} cm/dyne

FEATURES

Tonearm lifter, Auto-return mechanism, Removable dust cover, Anti-skating device, etc.

GENERAL

Power Source:	(J), (M)	120V, 60Hz
	(U), (P)	110~120V,220~240V, 50/60Hz
	(E)	220V, 50Hz
	(A)	240V, 50Hz
	(B)	240V, 50Hz
Power Consumption:	13 watts (50/60Hz)	
Dimensions:	46(W) x 36(D) x 13(H) cm (18-1/8 x 14-3/16 x 5-1/8 inch)	
Weight:	6.0kg (13.2 lbs)	